

CLAIMS

1. A plasma generating electrode comprising at least a pair of electrodes disposed opposite to each other and generating plasma upon application of voltage
5 between the pair of electrodes,

at least one of the pair of electrodes including a plate-like ceramic body as a dielectric and a conductive film disposed inside the ceramic plate and having a plurality of through-holes formed through the conductive film in its thickness direction, the through-holes having a cross-sectional shape including an arc shape along a plane
10 perpendicular to the thickness direction.

2. The plasma generating electrode according to claim 1, wherein the through-holes have a circular cross-sectional shape along a plane perpendicular to the thickness direction.
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3. The plasma generating electrode according to claim 1 or 2, wherein the through-holes are regularly arranged in the conductive film.

4. The plasma generating electrode according to any of claims 1 to 3, wherein
20 the conductive film is disposed inside the ceramic formed body by screen printing, calender rolling, spraying, chemical vapor deposition, or physical vapor deposition.

5. The plasma generating electrode according to any of claims 1 to 4, wherein the through-holes have a diameter of 1 to 10 mm.
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6. The plasma generating electrode according to any of claims 1 to 5, wherein a center-to-center distance between the adjacent through-holes is 1.5 to 20 mm.

7. The plasma generating electrode according to any of claims 1 to 6, wherein the conductive film includes at least one metal selected from the group consisting of tungsten, molybdenum, manganese, chromium, titanium, zirconium, nickel, iron, silver, copper, platinum, and palladium as a major component.

8. A plasma generation device comprising the plasma generating electrode according to any of claims 1 to 7.

9. An exhaust gas purifying device comprising the plasma generation device according to claim 8 and a catalyst, the plasma generation device and the catalyst being disposed inside an exhaust system of an internal combustion engine.